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jc135 U.S. PTO

Attorney Docket No. 3001 P 009

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Continuation Patent Application Of:  
Kenneth Kiron and Kevin S. Bander

Mailed: May 26, 2000

For: Open End Mutual Fund Securitization Process

- ) Prior Application:
- ) Application No. 09/140,868
- ) Filed: August 27, 1998
- ) Art Unit: 2761
- ) Examiner: S. Tkacs
- ) Present Application:
- ) Examiner: Not Assigned
- ) Art Unit: Not Assigned

jc815 U.S. PTO  
09/579801  
05/26/00

CONTINUATION PATENT APPLICATION  
TRANSMITTAL FILING UNDER 37 C.F.R. §1.53(b)

Box Patent Application  
Commissioner For Patents  
Washington, DC 20231

Dear Sir:

This is a request for filing a continuation application of co-pending prior Application No. 09/140,868 under 37 C.F.R. § 1.53(b). The parent application was filed on August 27, 1998 by Applicants Kenneth Kiron and Kevin S. Bander and is similarly entitled "Open End Mutual Fund Securitization Process." The parent application is a divisional of Application No. 08/542,431 filed on October 12, 1995, now U.S. Patent No. 5,806,048.

**Benefit of Prior U.S. Applications**

The attached continuation application being transmitted claims the benefit of prior U.S. applications, as indicated below.

**Papers Enclosed**

In accordance with 37 C.F.R. § 1.63(d), the specification filed herewith contains no new matter. Accordingly, a copy of the executed Declaration and Power of Attorney from the parent application (U.S. Application No. 09/140,868, which is a copy of the executed Declaration and Power of Attorney from its parent application (U.S. Application No. 08/542,431, now U.S. Patent No. 5,806,048), is submitted herewith.

The papers attached are as follows:

- Specification, Claims and Abstract, as originally filed October 12, 1995;
- Three (3) sheets of Drawings containing Figures 1A-1L and 2, as originally filed October 12, 1995;
- Substitute Specification and Abstract, filed February 9, 1998;
- Amendment filed February 9, 1998 amending the Claims;
- Preliminary Amendment filed August 26, 1998;
- Response to Office Action filed September 2, 1999 amending the Claims; and
- Terminal Disclaimer filed September 2, 1999.

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### Additional Papers Enclosed

A Preliminary Amendment is also attached requesting cancellation in the attached application of claims 19-51 before calculating the filing fee.

A copy of the executed Verified Statement Claiming Small Entity Status - Small Business Concern from the parent application (U.S. Application No. 09/140,868), which is a copy of the executed Verified Statement Claiming Small Entity Status - Small Business concern from its parent application (U.S. Application No. 08/542,431, now U.S. Patent No. 5,806,048).

### Declaration or Oath (including Power of Attorney)

As previously stated, a copy of the executed Declaration and Power of Attorney filed in the prior U.S. application (U.S. Application No. 09/140,868) is submitted herewith, in accordance with 37 C.F.R. §1.63(d). Also enclosed is a copy of the Associate Power of Attorney filed September 2, 1999 in Application No. 09/140,868.

### Incorporation by Reference

The entire disclosure of the prior applications, from which a copy of the oath or declaration is supplied, is considered as being part of the disclosure of the accompanying application and is hereby incorporated herein by reference.

### Inventorship Statement

The inventorship for all the claims in this application is the same as that for the parent application.

### Fee Calculation (37 C.F.R. § 1.16)

The filing fee has been calculated as shown below:

			Small Entity			Other Than A Small Entity	
For:	No. Filed	No. Extra	Rate	Fee	or	Rate	Fee
Basic Fee				\$345	or		\$690
Total Claims	23 - 20 =	3	x 9 =	\$ 27	or	x 18 =	\$
Indep. Claims	4 - 3 =	1	x 39 =	\$ 39	or	x 78 =	\$
<input type="checkbox"/> First Presentation of Multiple Dependent Claim			x 130 =	\$0	or	x 260 =	\$
			Total	\$411	or	Total	\$

Attorney Docket No. 3001 P 009

Title: "Open End Mutual Fund Securitization Process"

Inventors: Kenneth Kiron and Kevin S. Bander

Page 3

X Check No. 4447 in the amount of \$411 is attached. The Commissioner is hereby authorized to credit any overpayment or charge any deficit to Deposit Account No. 23-0280.

**Relate Back--35 U.S.C. 120**

As required under 35 U.S.C. 120, the Specification of the attached application has been amended in the Preliminary Amendment to include the following specific reference to the earlier filed parent application:

"This application is a continuation of co-pending prior U.S. Application No. 09/140,868 filed August 27, 1998 which is a divisional of U.S. Application No. 08/542,431 filed October 12, 1995 now U.S. Patent No. 5,806,048."

Please address all future communications to:

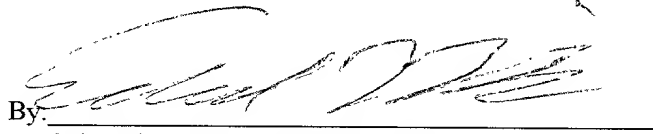
Edward L. Bishop  
Wallenstein & Wagner, Ltd.  
311 South Wacker Drive, 53rd Floor  
Chicago, Illinois 60606-6622  
312.554.3300

Respectfully submitted,

Date:

5/26/2000

By:



Edward L. Bishop, Reg. No. 39,110  
Wallenstein & Wagner, Ltd.  
311 South Wacker Drive, 53rd Floor  
Chicago, Illinois 60606-6622  
312.554.3300  
Attorneys for Applicant

**CERTIFICATION UNDER 37 C.F.R. § 1.10**

Express Mail Label No. EL619807784US

Date of Deposit: May 26, 2000

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10, postage prepaid, on the date indicated above and is addressed to: Box Patent Application, Fee, Commissioner for Patents, Washington, D.C. 20231.

Kathleen Rudquist  
/99419.1

# VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS

Docket Number (Optional)

(37 CFR 1.9(f) & 1.7(c))--SMALL BUSINESS CONCERN

Applicant or Patentee: MOPEX, INC.

Serial or Patent No.: \_\_\_\_\_

Filed or Issued: \_\_\_\_\_

OPEN END MUTUAL FUND SECURITIZATION PROCESS

I hereby declare that I am

☒ the owner of the small business concern identified below:

☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF SMALL BUSINESS CONCERN MOPEX, INC.

ADDRESS OF SMALL BUSINESS CONCERN 309 WEST 57th ST. #1707  
NY NY 10019

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d). For purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in:

☐ the specification filed herewith with title as listed above.

☒ the application identified above.

☐ the patent identified above.

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights in the invention must file separate verified statements averring to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d), or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization having any rights in the invention is listed below:

☒ no such person, concern, or organization exists.

☐ each such person, concern or organization is listed below.

Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING Kenneth KIRON

TITLE OF PERSON IF OTHER THAN OWNER PARTNER / PRINCIPAL

ADDRESS OF PERSON SIGNING 309 West 57th St. #1707 NY NY 10019

SIGNATURE KKK

DATE 10/10/95



00579901-052500

**VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS**  
(37 CFR 1.9(f) & 7(b))--INDEPENDENT INVENTOR

Docket Number (Optional)

Applicant or Patentee: Kenneth K. Row

Serial or Patent No.: \_\_\_\_\_

Filed or Issued: \_\_\_\_\_

Title: Open end Mutual End Securitization Process

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees to the Patent and Trademark Office described in:

- ☐ the specification filed herewith with title as listed above.  
☒ the application identified above.  
☐ the patent identified above.

I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☐ No such person, concern, or organization exists.  
☒ Each such person, concern or organization is listed below.

Mopox, SFC.

Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Kenneth K. Row  
NAME OF INVENTOR

[Signature]  
Signature of inventor

10/12/95  
Date

Kevin Bander  
NAME OF INVENTOR

[Signature]  
Signature of inventor

10/11/95  
Date

NAME OF INVENTOR

Signature of inventor

Date



VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR 1.27(a)) AND 1.27(b)-Independent Inventor

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9 (c) for purposes of paying reduced fees under Section 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the invention entitled OPEN end Mutual Fund described in

☒ the specification filed herewith

☐ application serial no. \_\_\_\_\_, filed \_\_\_\_\_

I have not assigned, granted, conveyed or licensed and am under no obligation under contract or law to assign, grant convey or license, any rights in the invention to any person who could not be classified as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any right in the invention is listed below:

☐ no such person, concern, or organization

☒ persons, concerns, or organizations listed below\*

\*Note: Separate verified statements are required from each named person, concern, or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

FULL NAME MOPEX, INC.

ADDRESS 309 WEST 57th St #1707  
NY, NY 10019

☐ Individual ☒ Small business  
☐ nonprofit organization

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fees due after the date on which status as a small entity is no longer appropriate. (37 CFR 128(b)).

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon, or any patent to which this verified statement is directed.

Full name of sole or first inventor

Kenneth KIRON

Inventor's signature

K. KIRON

Date

10/10/95

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Re Continuation Patent Application Of:  
Kenneth Kiron and Kevin S. Bander

Mailed: May 26, 2000

For: Open End Mutual Fund Securitization Process

) Prior Application:  
) Application No. 09/140,868  
) Filed: August 27, 1998  
) Art Unit: 2761  
) Examiner: S. Tkacs  
) Present Application:  
) Examiner: Not Assigned  
) Art Unit: Not Assigned



Box Patent Application  
Fee  
Commissioner For Patents  
Washington, D.C. 20231

**PRELIMINARY AMENDMENT**

Dear Sir:

The above-identified Application is a continuation of co-pending prior U.S. Application No. 09/140,868 filed August 27, 1998 which is a divisional of U.S. Application No. 08/542,431 filed October 12, 1995 now U.S. Patent No. 5,806,048. Before examination, please amend the instant Application as follows:

**In the Specification:**

On page 1, line 5 (of the Substitute Specification), please insert

-- This Application is a continuation of co-pending prior U.S. Application No. 09/140,868 filed August 27, 1998 which is a divisional of U.S. Application No. 08/542,431 filed October 12, 1995 now U.S. Patent No. 5,806,048.- -.

**In the Claims:**

Please cancel Claims 19-51 and add the following Claims:

-- 52. An electronic data processing method for administering a financial product traded as a security comprising:

- a) creating a mutual fund comprising a plurality a selected portfolio of securities;
- b) receiving information on each of said one or more securities in the selected portfolio in an electronic data format;
- c) processing said information to determine in real time the price of the financial product on the basis of a user-defined method of weighting the selected portfolio of securities.

53. A method comprising the steps of:

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creating an open ended mutual fund having a class of shares and a portfolio comprising of securities satisfying a predetermined criteria;

identifying a revised set of securities satisfying the predetermined criteria;

changing the securities comprising the portfolio in response to the identifying of the revised set of securities;

determining in real time the price of the financial product based on a user-defined method of weighting the securities comprising the portfolio.

54. The method of claim 53 further comprising the step of trading the outstanding class of shares on an exchange.

55. The method of claim 53 further comprising the step of listing the outstanding class of shares on an exchange.

56. The method of claim 53 further comprising the step of correlating the price of the outstanding class of shares to the price of the portfolio.

57. The method of claim 53 further comprising the step of calculating overall positions of shareholders of the outstanding class of shares.

58. The method of claim 53 further comprising the step of calculating a net asset value of the mutual fund.

59. The method of claim 53 further comprising the steps of buying and selling the outstanding shares of the mutual fund at an agreed upon price.

60. The method of claim 53 further comprising the steps of trading the outstanding shares of the mutual fund on an exchange and tracking the trades on the exchange.

61. The method of claim 53 further comprising the step of electronically trading the outstanding shares of the mutual fund.

62. The method of claim 53 further comprising the step of creating a derivative product related to the open ended mutual fund.

63. The method of claim 53 further comprising the step of clearing trades of the open ended financial product.

64. A method comprising the steps of:

creating an open ended mutual fund having a plurality of shares and comprising of a selected portfolio of securities;

trading the shares on a securities exchange;

determining a price of the mutual fund in real time based on information about the portfolio and a user-defined method of weighting;

providing an indication of the in real time determined price of the mutual fund;

designating a revised portfolio of securities; and,

changing the securities comprising the mutual fund in response to designating a revised portfolio of securities.

65. The method of claim 64 further comprising the steps of listing the shares on an exchange and trading the shares on the exchange.

66. The method of claim 64 further comprising the step of correlating the price of the shares to the price of the portfolio.

67. The method of claim 64 further comprising the step of calculating overall positions of shareholders of the shares.

68. The method of claim 64 further comprising the step of calculating a net asset value of the mutual fund.

69. The method of claim 64 further comprising the steps of buying and selling the shares of the mutual fund product at a mutually agreed upon price.

70. The method of claim 64 further comprising the steps of trading the outstanding shares of the mutual fund on an exchange and tracking the trades on the exchange.

71. The method of claim 64 further comprising the step of electronically trading the outstanding shares of the mutual fund.

72. The method of claim 64 further comprising the step of creating a derivative product related to the open ended mutual fund.

73. The method of claim 64 further comprising the step of clearing trades of the open ended mutual fund.

74. An electronic data processing method for calculating the estimated price of a real time open end financial product comprising the steps of:

identifying a group of securities;  
retrieving data representative of a group of securities and the current estimated price of each security;  
storing the value of the securities in a portfolio within a computer;  
allocating said portfolio value to a fixed number of shares over a predetermined period of time comprised by a real time open ended financial product;  
recalculating the portfolio value in response to changes in the market value of the portfolio value;  
recalculating the estimated net asset value of the real time open end financial product in response to the change in the portfolio value;  
outputting an indication of the in real time determined estimated net asset value of the real time open end financial product.

**REMARKS**

This Preliminary Amendment is being submitted in connection with a continuation Application. The above Claims do not introduce new matter. The Commissioner is hereby authorized to charge payment of any deficit in these fees to Deposit Account No. 23-0280. A duplicate copy of this sheet is enclosed for that purpose.

Respectfully submitted,

Dated: 5/26/2000

By: 

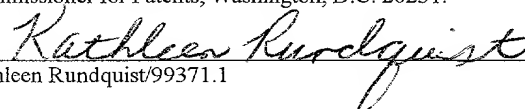
Edward L. Bishop, Registration No. 39,110  
WALLENSTEIN & WAGNER, LTD.  
311 South Wacker Drive, 53rd Floor  
Chicago, Illinois 60606-6622  
312.554.3300  
Attorney for Applicant

**CERTIFICATION UNDER 37 C.F.R. § 1.10**

Express Mail Label No. EL619807784US

Date of Deposit: May 26, 2000

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service, postage prepaid, under 37 C.F.R. § 1.10 on the date indicated above and is addressed to: BOX Patent Application, Fee, Commissioner for Patents, Washington, D.C. 20231.

  
Kathleen Rundquist/99371.1



*Handwritten:*  
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Sub-1-16  
4/2/98

# OPEN END MUTUAL FUND SECURITIZATION PROCESS

INVENTORS:            Kenneth Kiron  
                         Kevin S. Bander

5

This application relates to a new financial process which securitizes open end mutual funds to facilitate intra-day trading of the funds and linked derivative securities.

10

## BACKGROUND OF THE INVENTION

There are currently over 7,000 open end mutual funds registered with the Securities and Exchange Commission. None of these open end mutual funds, or any index of open end mutual funds, or any linked derivative, are traded on a National Securities Exchange. The reason for this phenomenon lies in the way that open end mutual funds sell their shares, and subsequently buy back their shares from the public.

20

Open end funds are required by law to sell their shares at the net asset value (N.A.V.), which represents the total assets owned by the fund, less the total liabilities, divided by the number of shares outstanding, plus a sales charge (also known as a sales load). When buying back their shares, open end funds must, by law, buy back their shares at their fund's N.A.V.

25

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Many mutual funds make hundreds (if not thousands) of trades during the day, purchasing and selling a wide range of financial securities, some of which are difficult to value. Thus, it is time consuming, tedious, expensive and otherwise difficult to determine an exact N.A.V. during the day. Consequently, over 99% of all open end funds allow investors to purchase and sell their funds only at the end of the day. The remaining 1% of open end funds, commonly known as sector funds, calculate their N.A.V. every hour, allowing a more frequent ability to buy or sell their shares. In either case, however, the investor does not know what price will be paid for the open end fund shares until after the order has been placed, and the fund has calculated its N.A.V.

Recently, mutual fund portfolio managers have developed a new type of mutual fund called an open end fund of funds. A fund of funds is an open end fund that invests in other open end mutual funds. But like all the other open end funds created in the past, they can only be bought and sold at the end of the day.

Another new product developed is called the SPDR™, which is short for Standard and Poors Depository Receipt. This security, which is traded on the American Stock Exchange, represents a fractional share of a basket of stocks known as the Standard and Poors 500 index (S&P500). While many mutual



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buy and sell a small number (less than six percent) of all  
open end mutual funds at a price other than net asset value,  
provided buyer and seller can agree on a price. This service  
has failed to generate significant trading volume, however,  
5 because only the public can buy or sell fund shares.  
Institutional investors, pension funds, portfolio managers,  
and other professional investors, which traditionally  
represent 70 to 80% of trading volume, are prevented by law  
from buying or selling open end mutual funds at a price other  
10 than N.A.V. The Jack White program also allows short selling,  
but shares must be "found," which can take days, weeks, or  
months to complete the transaction. As a result of these  
restrictions, it is very difficult, if not impossible, for  
either the public or the professional investor to purchase or  
15 sell open end mutual funds during the day.

Because of the lack of liquidity and the legal obstacles  
involved in trading open end funds at prices other than  
N.A.V., up to now, those skilled in developing new products  
20 for stock exchanges thought that there was no workable way to  
trade open end funds, an index of open end funds, or linked  
derivative securities. The obstacles appeared insolvable.

All of the open end funds and products presently  
25 available suffer a number of disadvantages:

A) Open end funds cannot sell or buy back their shares at a price other than N.A.V. (plus sales load, if any).

B) Open end funds are unable to let their customers know what price they will receive when they place their order.

5 C) Open end funds are not traded on an exchange so investors cannot leverage their investments through the trading of derivative securities.

D) Open end funds do not allow investors to place orders including: good 'til cancelled (GTC), open, market, limit, stop loss, or stop limit, which would allow an investor to purchase or sell shares at a specific price or time.

E) Open end funds impose fees for purchases and sales of their shares if they occur frequently

F) Open end funds impose fees for investors who do not own  
15 a minimum amount of shares.

G) Open end shares cannot be easily sold short. Shares must be found, which could take days, weeks or even years.

H) All shares of open end mutual funds and unit investment trusts theoretically could be redeemed in one day, meaning a fund may have its assets drop to zero at any time.

I) Open end fund shares cannot be sold or purchased except through written notification, which may take several days to mail or process.



### SUMMARY OF THE INVENTION

5 The present invention's open end fund securitization process will allow for the first time: (a) intra-day trading of an unlimited number of mutual fund indexes comprised of open end funds; (b) intra-day trading of an unlimited number of open end mutual funds with a greater degree of liquidity; and (c) intra-day trading of derivative securities linked to open end funds and indexes of open end funds.

10 This process is made possible by the creation of a second type of security, which will invest substantially all of its assets in the targeted open end mutual fund shares. The preferred embodiment for this new security is a "closed end fund of funds", which has a fixed number of shares  
15 outstanding, and a constant portfolio which is invested exclusively in the shares of the targeted open end fund(s). The result is a new security which will synthetically replicate the performance of those shares purchased, and do so with a high degree of correlation and consistency. This new  
20 security can then be listed on a National Securities Exchange and traded without restriction. After trading begins, linked derivative securities can then be listed and traded.

25 Other objects and advantages of the present invention include:

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- A) Any open end fund, when securitized, can be listed on a stock exchange and traded at any second, minute or hour, regardless of the open end fund N.A.V.
- 5 B) Investors can determine what price will be paid before an order is placed.
- C) A National Securities Exchange (N.S.E.) will be able to list derivatives on the securitized open end funds, because of the greater price transparency generated through the trading of the securitized open end funds. The invention will act as
- 10 a hedge for market makers who wish to lay off their risk of making markets in options on the underlying security.
- D) Investors will be able to leverage their investments.
- E) Investors will be able to place GTC, open, stop loss, market, limit orders when buying or selling their funds.
- 15 F) Investors can buy or sell the securitized funds as often as they wish with no penalty.
- G) Investors will be able to purchase or sell their shares immediately by making a phone call to their broker, or by electronic trading.
- 20 H) Investors will not be charged arbitrary fees for frequent purchases or selling of the securitized open end funds.
- I) Investors will not be charged additional fees for owning small quantities of shares.
- J) The securitized funds have fixed number of shares which
- 25 provides stability of asset levels.

K) Investors will be able to sell shares short quicker, and with greater liquidity.

L) Open end fund management will benefit from reduced volatility in their cash levels and in their frequently traded customer account assets, resulting in lower fund expense ratios.

M) Investors purchasing a securitized fund will pay a reduced sales load in many cases than they would otherwise have to pay because of the bulk purchasing power the securitized fund will have when investing in specific open end funds.

Further objects and advantages include the ability to trade a futures contract on both a securitized fund share and an index of securitized fund shares with linked derivative securities. In addition, the present invention solves a long existing but unsolved and unrecognized need. Many investors, both professional and non-professional own multiple mutual funds in an effort to diversify their investment portfolio's. An index of open end mutual funds would allow greater diversification, lower transaction costs, expanded investment choices and the ability to measure their fund performance against a relevant benchmark index. The index could be calculated many different ways with a great deal of flexibility: equal price weighted, capitalization weighted, or geometrically weighted, depending upon the need. Still

further objects and advantages will become apparent from a consideration of the ensuing description and drawings.

#### BRIEF DESCRIPTION OF DRAWINGS

5           The present invention will be more fully understood by reference to the following detailed description thereof when read in conjunction with the attached drawings, and wherein:

10           Figures 1A and 1B represent how an open-end mutual fund index is created in a general data processing computer. These figures represent computer requirements and also comprise a schematic flowchart of process operating therewithin.

15           Figure 2 illustrates how the preferred embodiment of an open-end mutual fund index is synthetically duplicated through the creation of a new security. The preferred embodiment for this new security is a "closed end fund" and linked derivative securities.

#### 20           DETAILED DESCRIPTION OF DRAWINGS

          Referring to Figure 1A, the box designated 10 represents an electronic database (a "master database") of extensive statistical information stored in a computer containing the entire universe of open end mutual fund statistics in  
25           existence registered in the defined country or geographic area. The preferred embodiment database includes extensive

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statistics for each open end fund. This information includes  
fund net asset value (N.A.V.) for each year, portfolio  
composition, investment objective, load adjusted and  
unadjusted return, maximum sales charge, median market  
capitalization, daily, monthly, quarterly, yearly, multi-year  
returns, mpt, beta, sharpe, R squared, standard deviation,  
historical risk/reward ratios, N.A.V. distribution adjusted  
earning, payout ratio, potential capital gains exposure,  
price/book ratio, price/earnings ratio, prospectus, purchase  
constraints, redemption fees, sector weighting, shareholder  
fees, total return, total return percentile, turnover ratio,  
deferred fees, debt % total capitalization, dividends,  
distributor, telephone number, manager name, manager tenure,  
class of shares, and brokerage availability. It will be  
understood that not all of this information is required to  
practice the claimed invention.

As also reflected in box 10, the computer itself has a  
preferred specification of at least 420 megabytes of internal  
memory (hard drive), eight megabytes of RAM (random access  
memory), a CD ROM player operating at 4x speed (at least), a  
Pentium CPU, VGA monitor, and a keyboard.

The box designated 12 represents a computer program  
algorithm or step that eliminates those funds not available  
for purchase and puts these funds into a new database where



select only those funds that have a pre-selected asset level,  
mitigating some of these potential problems.

5           The time period (t) for which statistics will be  
chosen is very important. More so than many other types of  
security, an open end mutual fund is "ranked" for its  
performance based upon how well it does over specific time  
periods. The ability to segregate fund statistics information  
over various time horizons provide a unique tool to evaluate  
10       a funds performance.

15           The box designated 16 represents a computer program  
algorithm which separates the group of funds stored in a  
database created by the step set forth in box 14. This new  
group of funds is stored in a new memory location defined by  
its specific investment criteria. This criteria may include  
a subgroup including the fund investment objective or the  
sector weightings of its portfolio. Currently, the major fund  
investment objective subgroups include Aggressive Growth,  
20       Growth and Income, Growth, Income, Bond, Sector, Asset  
Allocation, Specialty, Equity Income, Europe Stock, Foreign  
Stock, Government Bond, Hybrid Income, Small Company, World  
Stock and World Bond.

25           The box designated 18 represents a computer program  
algorithm which searches and identifies all the funds where

the statistical performance is greater than the aggregate subgroup over time periods (t) and puts these funds into a new database where these funds are stored in a new memory location. The performance of a fund can be measured in many ways. It could be based upon total return, load adjusted return, unadjusted load return, or a return with dividends reinvested. Once the specified performance criteria have been selected, the computer can average all of the funds in that subgroup before retrieving those funds that have above average returns. All funds, for example, that have returns better than 50% of the funds in the universe would be selected as being above the "average" subgroup return. These funds would then be stored in a new memory location, to be analyzed at a later time.

The box designated 20 represents an algorithm where the computer searches and retrieves all funds where the risk is smaller than the aggregate subgroup over time periods (t) and stores these funds in a new database. Funds, for example that have a smaller risk profile than 50% (the exact average) of the funds in the subgroup would be selected as beating the "average" subgroup return. These funds would then be stored in a new memory location, to be analyzed at a later time.

Referring to Figure 1B, the box designated 22 represents an algorithm where the computer combines the funds identified



by the steps taken as set forth in boxes 18 and 20 to create a new group of open end mutual funds that have the lowest combined risk to return ratio over time periods (t) and puts these funds into a new database where the information on these funds is stored in a new memory location. Generally, this type of function is called a Relationship Search routine because it allows for linking together user defined criteria to produce one result. It is a very powerful tool for linking large amounts of information together.

The box designated 24 represents a step where the number of funds that the index will contain is chosen. This number could range from 1 to the number of funds in the database. Depending upon the investment objective or how much money is available to invest in the index, this number will fluctuate.

The box designated 26 represents the step where the index calculation method is selected. An index generally is calculated one of three ways; "Equally Priced", meaning all of the price are added up and divided by the total number of securities; "Capitalization Weighted", which is based upon the amount of price of the security times the number of shares outstanding; or "Geometrically Weighted", which involves a more complicated averaging of share prices. The index value can dramatically shift depending upon what weighting is used.

The box designated 28 represents a step that uses a formula which sequentially analyzes each risk/reward ratio of each permutation of funds selected by the computer in step represented in the box designated 30.

5

Box 30 is an algorithm wherein the general data processor eliminates the large risk/reward combinations found in "database index" using the formula determined by box 28, and sequentially stores in memory the smallest risk/reward combinations, stopping only when the smallest risk/reward ratio is found. This results in the selection of the final index. When all of the funds with superior returns have been identified and stored, and all the funds with lower than average risk have been identified and stored, the computer can then match up all of the different combinations of funds to determine which group contains the optimally lowest risk/highest return ratio. This ratio can be calculated over multiple time period to provide for example, the lowest ratio over 1, 3, 5, and 10 years. In the final group of funds, the number selected by the user pursuant to the step of box 24 will determine how many funds the index ultimately will contain.

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The box designated 32 represents the step of displaying a graph of the combined funds over time periods (t), showing their combined statistical performance based upon the

calculation method selected set forth in box 26. The computer is instructed to return to box 10 so the program may repeat itself.

5           Referring to Figure 2, the box designated 40 represents the group of open end mutual funds selected pursuant to the steps set forth in Figures 1A and 1B. These funds own financial securities including stock securities (box 42), bonds and money market instruments (box 44) and or hybrid,  
10 illiquid securities (box 46). The N.A.V. is calculated by the open end funds at the end of the day and disseminated to the closed end fund of funds.

15           The box designated 48 represents the closed end fund of funds which synthetically replicates the performance of those open end funds contained within box 40. By investing all available assets in box 40, the closed end fund of funds statistical performance correlates strongly and consistently with the open end funds located in box 40. A computerized  
20 accounting and reporting system, located within the closed end fund of funds, receives overall position reports of changes in fund share ownership through an electronic data link with an exchange clearing computer represented by box 50. Box 48 is the National Securities Exchange ("N.S.E.") clearing computer  
25 electronically calculating the overall positions of shareholders at the end of the day and then transferring all

shareholder information to the closed end fund. Upon receipt of this information, the accounting and reporting system generates information regarding tax liabilities, financial reports and other relevant documentation to shareholders, government agencies and other relevant parties.

Box 52 represents an electronic data link between the N.S.E. computer and the closed end fund of funds. The closed end fund of funds calculates its net asset value and disseminates that information to the N.S.E. on a daily basis. The N.S.E. then publishes that information to market participants including broker/dealers and institutional investors (box 54), market makers (box 56), brokerage firms (box 58) and public investors (box 60) who then buy and sell the synthetic fund shares intra-day at any mutually agreed upon price (which is used by market participants to derive the price of linked derivative securities). Linked derivative security valuations on the closed end fund of funds are generated, as represented by box 62, the valuation of which is based upon the market prices generated through real-time trading of the relevant closed end fund of funds by market participants located in box 54, box 56, box 58, and box 60. Box 62 is the N.S.E. computer calculating an index of various closed end fund of funds traded.

Box 64 represents the electronic data link between the N.S.E. clearing computer, which keeps track of the exchange trades that occur during the day, and the closed end synthetic fund.

5

While the inventors believe that an index of open end mutual funds comprised of those funds that have the largest return on investment and the lowest risk combination may outperform those funds that, in contrast, have demonstrated lower returns and higher risk, it must be noted that past performance does not guarantee similar performance in the future.

10

Thus, the reader will see that the index of mutual funds described herein provides a means for identifying superior historical performance within each subgroup obtainable through a screening process which minimizes the selection of high risk/low return open end mutual funds and maximizes the selection of those funds with low risk/high return statistical data. The hope is that by identifying and investing within an index of funds that have demonstrated superior risk/return ratios within a particular sector, these funds will continue to produce superior returns with low risk in the future than their peers.

20

25

5 The creation of a separate security, the preferred embodiment being a "closed end fund of funds", provides the means for investing intra-day in the desired open end funds, and enables market participants to derive a real-time valuation for linked derivative securities.

10 While the above description contains many specific examples, these should not be construed as limitations on the scope of the invention, but rather as an exemplification of one preferred embodiment thereof. Many variations are possible. For example, instead of creating a closed end fund of funds, a unit investment trust could be created to replicate the performance of an open end fund or group of funds. While this security could have large swings in its capitalization level, it nevertheless may be able to replicate the performance of an open end fund or group of funds, and act as a hedge for listed derivative securities.

20 In addition, an index could be created based upon such strict requirements that the index would be limited to just one fund. Another index variation might be one that selects only those funds that beat an external index such as the S&P500 or Dow Jones Industrial Average. In addition, an index of securitized funds, as well as linked derivative securities including puts and calls, futures, caps and floors, total return swaps, collars, warrants, equity swaps, swaptions,

knock-out options and variation thereof could be traded through the Over the Counter Market, which is located off the exchange floor. Accordingly, the scope of the invention should be determined not by the embodiments illustrated, but  
5 by the appended claims and their legal equivalents.

ABSTRACT OF THE DISCLOSURE

OPEN END MUTUAL FUND SECURITIZATION PROCESS

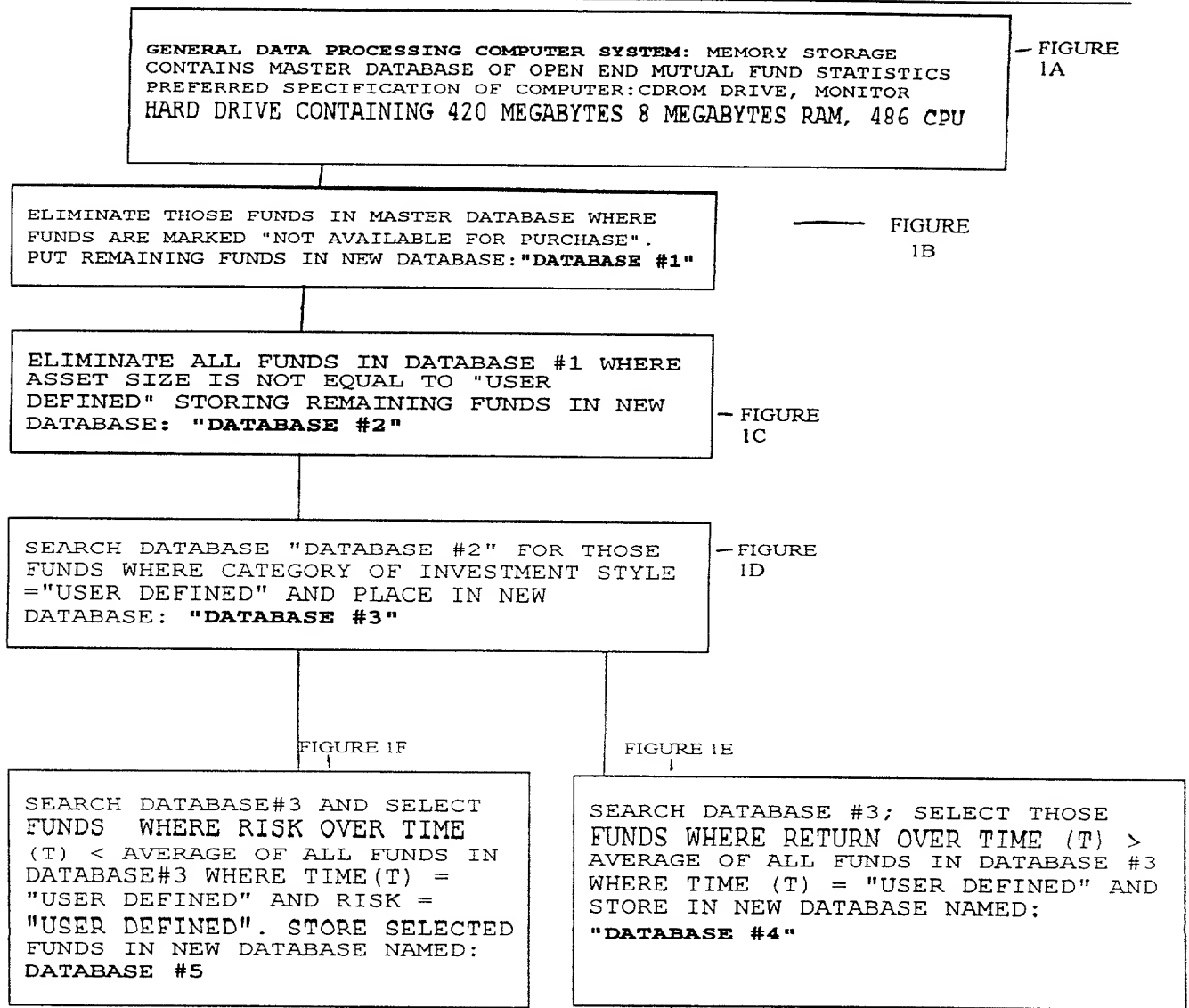
5 A mutual fund securitization process permitting the  
trading of open end mutual funds and linked derivative  
securities on or off the floor of a National Securities  
Exchange. The targeted individual open end mutual fund or  
group of open end mutual funds, selected through a screening  
process is securitized through the creation of a new, separate  
10 security. This new security is preferably a "closed end fund  
of funds" and linked derivative securities, which  
synthetically replicate the statistical relationship of the  
defined individual or group of open end mutual funds. The  
maintenance of financial records for the new security is  
15 maintained by electronically storing dividend, capital gains  
and income received from the open end funds which have been  
invested in, and calculating pro-forma financial statements to  
disseminate to shareholders and all relevant parties.

08/ 542431



FIGURE 1

SCHEMATIC FLOWCHART OF:  
OPEN END MUTUAL FUND INDEX COMPUTER PROGRAM

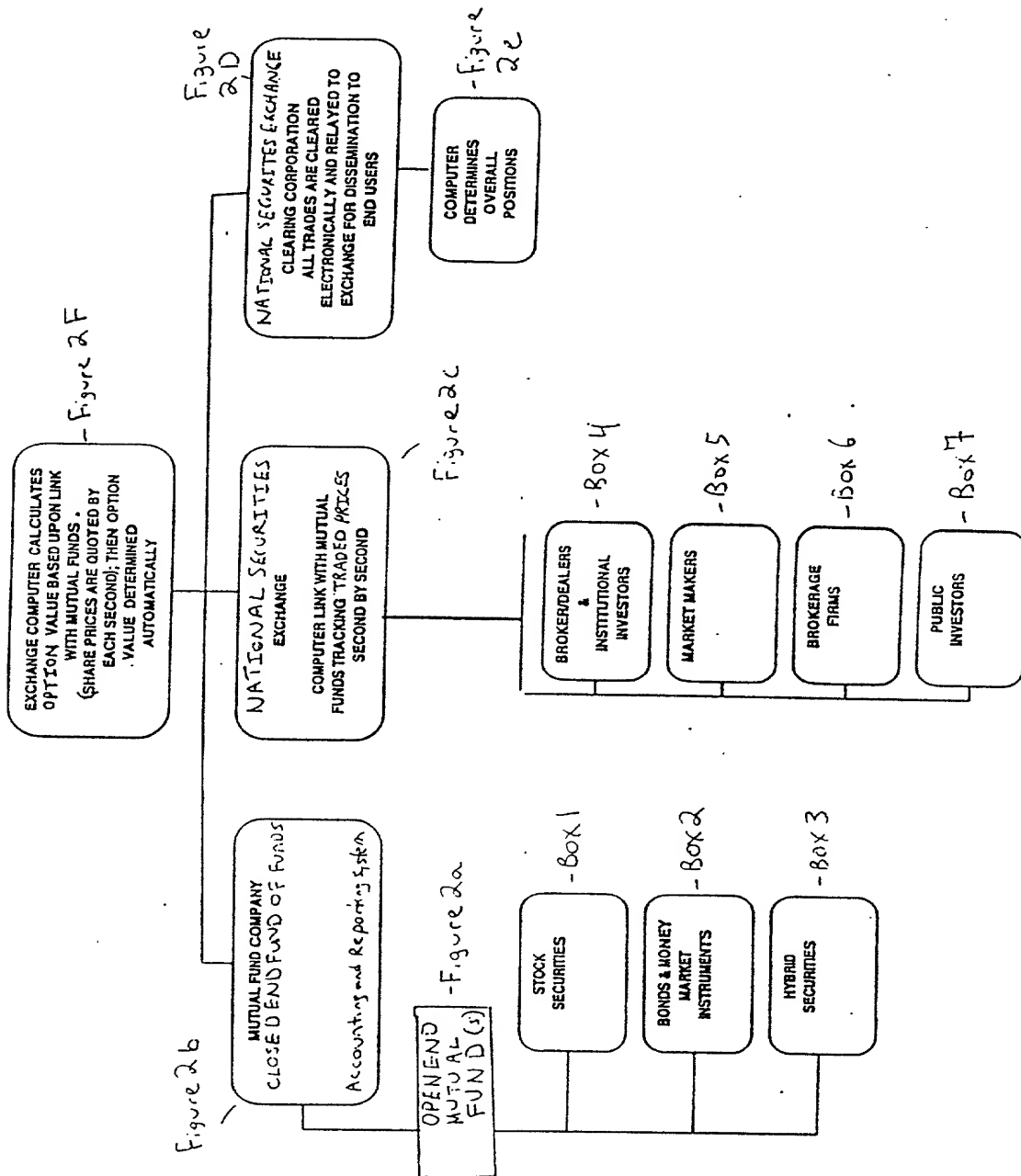


- FIGURE  
1L

FIGURE 2

PROCESS FOR INTRA-DAY TRADING OF SECURITIZED  
OPEN END MUTUAL FUND,  
INDEX AND LINKED DERIVATIVE SECURITIES

13



Attorney Docket No. 3001 P 004

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re U.S. Patent Application Of:  
Kenneth Kiron and Kevin S. Bander

Application No. 09/140,868

Filed: August 27, 1998

For: Open End Mutual Fund Securitization Process )

)  
)  
)  
) Group Art Unit: 2761  
)

) Examiner S. Tkacs  
)

Assistant Commissioner For Patents  
Washington, D.C. 20231

ASSOCIATE POWER OF ATTORNEY (37. C.F.R. 1.34)

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CERTIFICATE OF MAILING (37 C.F.R. § 1.8a)

I hereby certify that this correspondence is, on the date shown below, being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner For Patents, Washington, D.C. 20231 on

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*Kathleen Rundquist*

Kathleen Rundquist/80887.1

009750 " 19990926

# DECLARATION FOR PATENT APPLICATION

Docket Number (Optional)

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled OPENED MUTUAL FUND SECURITIZATION PROCESS, the specification of which

is attached hereto unless the following box is checked:

☐ was filed on \_\_\_\_\_ as United States Application Number or PCT International Application Number \_\_\_\_\_ and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

(Number)	(Country)	(Day/Month/Year Filed)	Priority Claimed
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Yes <input type="checkbox"/> No

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

(Application Number)	(Filing Date)	(Status -- patented, pending, abandoned)

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Kenneth K. Rood at telephone number 212-244-4700  
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Address all correspondence to NY NY 10019

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and those like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor (given name, family name) Kenneth K. Rood  
Inventor's signature [Signature] Date 10/17/95  
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Post Office Address \_\_\_\_\_

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☐ Additional inventors are being named on separately numbered sheets attached hereto.

DECLARATION

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe that I am the original, first, and sole inventor (if only one name is listed below) or an original, first, and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled OPEN END M.F. Fund Segregation Process

The specification of which  
(check one)

☒ is attached hereto.

☐ was filed on \_\_\_\_\_ as application serial no. \_\_\_\_\_

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Sec. 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, Sec. 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

00579094 062600

Prior Foreign Application(s)(if any)

Priority Claimed

\_\_\_\_\_  
(Serial Number)

\_\_\_\_\_  
(Country)

\_\_\_\_\_  
(Day, Month  
Year filed)

[ ] [ ]

(Yes) (No)

I hereby claim the benefit under Title 35, United States Code, Sec. 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Sec. 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Sec. 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

\_\_\_\_\_  
(Application serial  
number)

\_\_\_\_\_  
(Filing date)

\_\_\_\_\_  
(Status-,patented,  
pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor

Kenneth KIRON

Inventor's signature

K. J. C.

Date

10/10/95

Residence

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Citizenship

USA

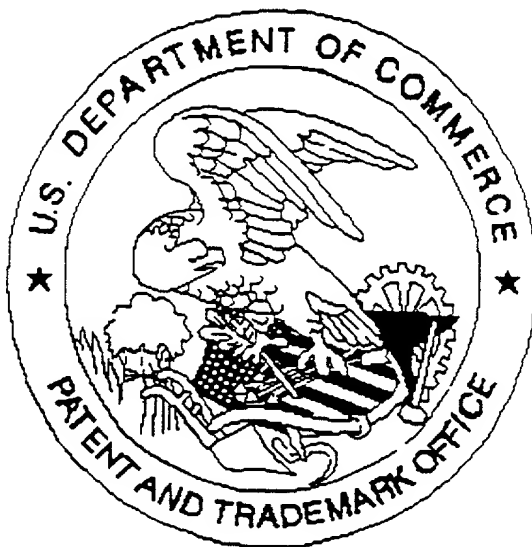
Post Office Address

\_\_\_\_\_  
(Supply similar information and signature of second and subsequent inventors.)

009250-10067560



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